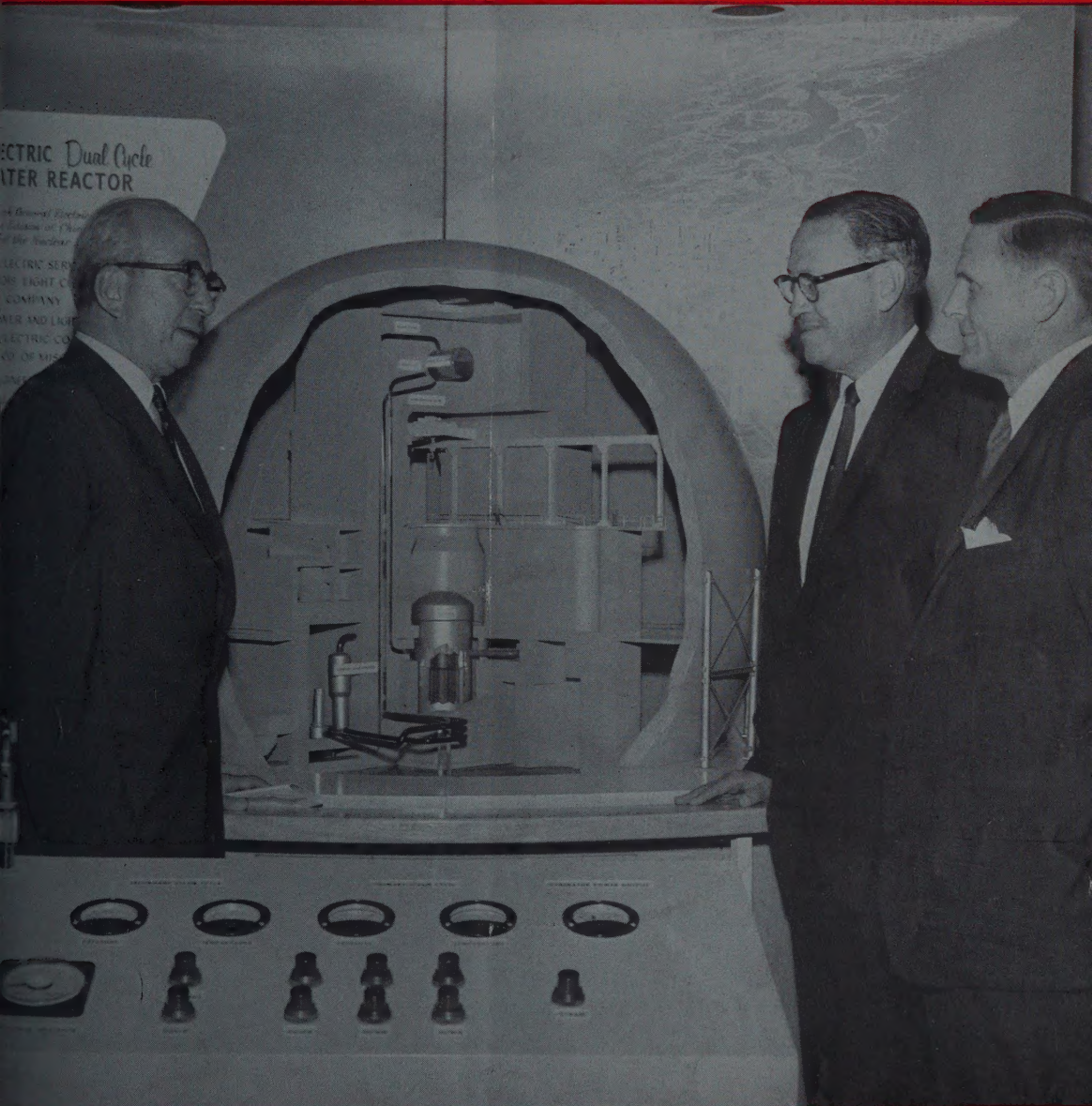


COMMERCE

JULY 1957

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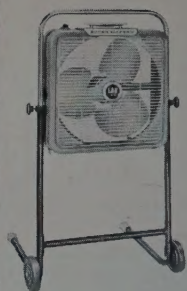
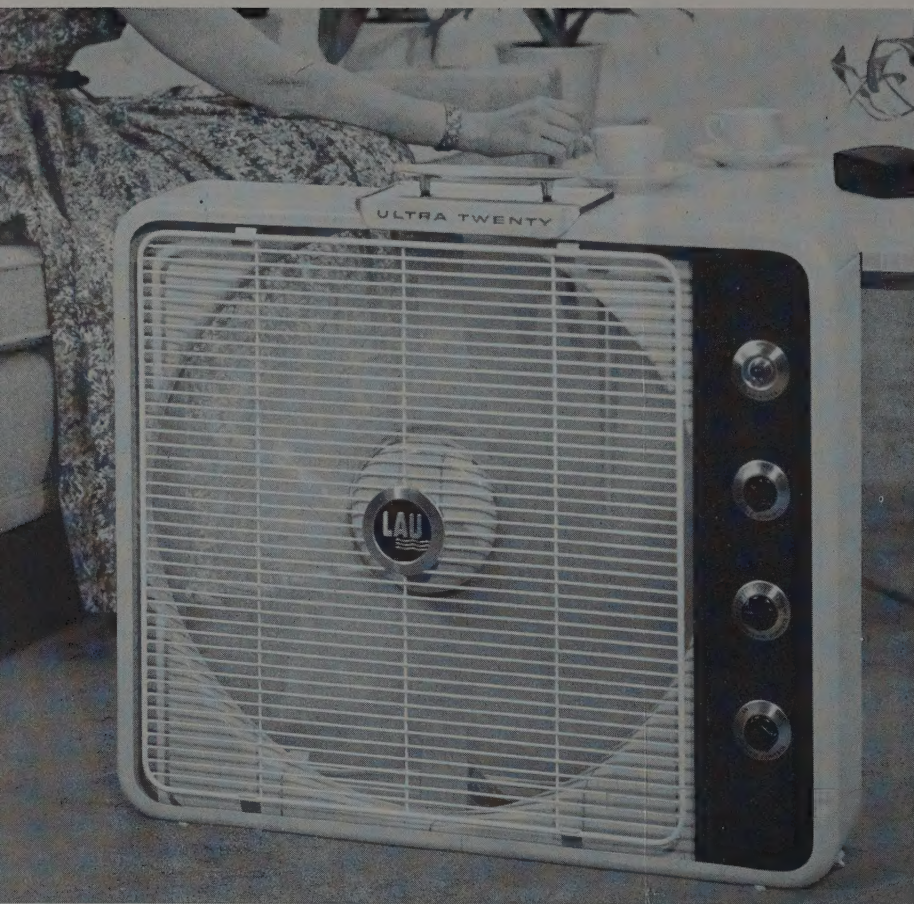
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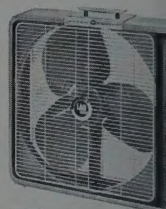
Chicago — Atomic Capital of the World — See Page 5

from the Executive's Easel

The Calumet Area—Boom or By-pass?



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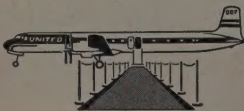
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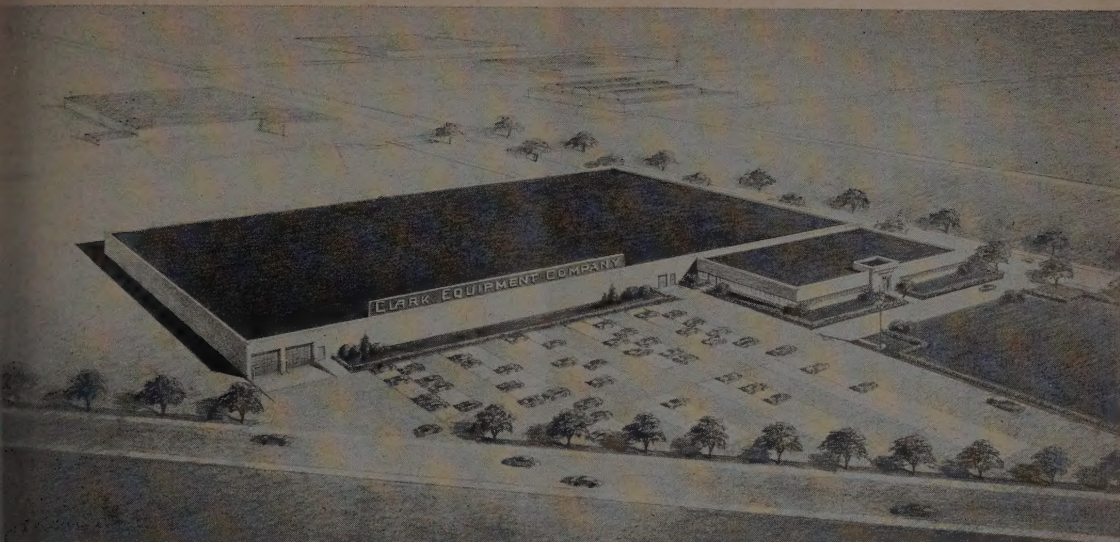
statistics of...

Chicago Business

	May, 1957	April, 1957	Ma
Building permits, Chicago.....	3,335	2,976	
Cost.....	\$ 29,674,476	\$ 27,548,957	\$ 28
Contracts awarded on building projects,			
Cook Co., cost.....	\$ 73,384,000	\$ 107,191,000	\$ 105
(F. W. Dodge Corp.)			
Real estate transfers, Cook Co.....	7,334	7,594	
Consideration.....	\$ 7,565,646	\$ 6,705,848	\$ 8
Bank clearings, Chicago.....		\$ 4,853,050,848	\$ 4,867
Bank debits to individual accounts:			
7th Federal Reserve District.....	\$29,593,000,000	\$27,957,000,000	\$27,139
Chicago only.....	\$14,845,589,000	\$14,026,340,000	\$13,310
(Federal Reserve Board)			
Bank loans (outstanding) Chicago weekly			
reporting banks.....	\$ 4,112,000,000	\$ 4,087,000,000	\$ 3,718
Midwest Stock Exchange transactions:			
Number of shares traded.....	2,336,934	2,070,000	2
Market value of shares traded.....	\$ 77,884,262	\$ 72,881,480	\$ 89
L.C.L. merchandise cars, Chicago area.....	14,906	15,386	
Electric power production, kwh, Comm.			
Ed. Co.....	1,635,329,000	1,663,694,000	1,568
Industrial gas sales, therms, Chicago.....	15,682,811	16,407,121	16
Steel production (net tons), metropolitan			
area.....	1,782,000	1,741,500	1
Revenue passengers carried by Chicago			
Transit Authority lines:			
Surface division.....	42,493,735	41,758,175	41
Rapid transit division.....	9,817,855	9,716,542	9
Postal receipts, Chicago.....	\$ 12,980,260	\$ 13,669,588	\$ 12
Air passengers, scheduled, Midway and			
O'Hare airports:			
Arrivals.....	442,668	410,000	
Departures.....	453,370	416,647	
Consumers' Price Index (1947-49=100),			
Chicago.....	122.2	122.0	
Receipts of salable livestock, Chicago.....	395,809	377,622	
Unemployment compensation claimants,			
Cook & DuPage counties.....	38,575	36,128	
Families on relief rolls:			
Cook County.....	22,710	23,393	
Other Illinois counties.....	13,521	14,636	

August, 1957, Tax Calendar

Date Due	Tax	Returnable
1	Franchise Tax becomes delinquent and penalties of 1% per month begin to accrue	Secretary of State
15	Illinois Retailers' Occupation Tax and MROT return and payment for month of July	Dept. of Revenue
15	If total income and social security taxes (O.A.B.) withheld from employee plus employer's contribution in July exceed \$100, pay amount to	Authorized Depos



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ighth New Plant Located in Clearing's 73rd Street District

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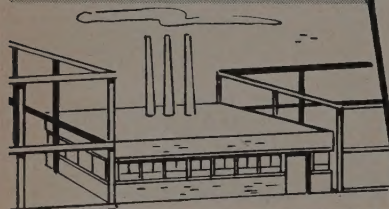
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COMMERCE

Magazine

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July, 1957

Volume 54

Number 6

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Tom Callahan, Associate Editor

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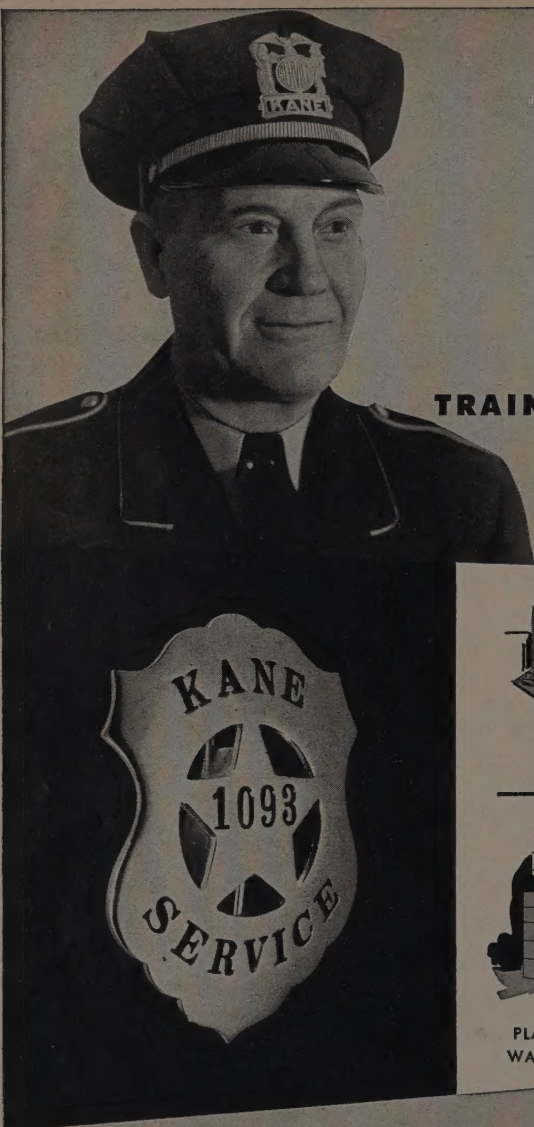
Our Cover

Looking at a model of the dual cycle boiling water reactor being built by General Electric for the Dresden nuclear power station of Commonwealth Edison Company are (left to right): Admiral Lewis L. Strauss, chairman of the U. S. Atomic Energy Commission; Willis Gale, chairman, Commonwealth Edison; and Cramer W. LaPierre, executive vice president of General Electric.

The Dresden dual cycle boiling water reactor will be the country's largest nuclear power reactor and is a modification of the simple boiling reactor. The latter uses steam created directly in the reactor. The dual cycle reactor does also, but in addition, this system has another cycle in which hot water from the steam drum, on its way back to the reactor, passes through secondary generators to create more steam. The principle of the boiling water reactor was developed by the Atomic Energy Commission's Argonne National Laboratory and expanded by General Electric into the dual cycle arrangement.

Experiment and test have demonstrated the inherent safety characteristic of the boiling water type reactor. In addition, the safety system is designed to cause an immediate shutdown in the event of improper operations. Safety signals override all other controls and call for instant shutdown of the plant. Even though the safety provisions make the possibility of a nuclear accident extremely remote, the reactor and associated equipment, as a further safeguard, are housed in a 190-foot vapor-tight steel sphere that would contain any radioactive vapor that might be released.

The turbine-generator for the Dresden Station is basically the same as a conventional steam facility. The turbine will have three sections—high pressure, intermediate pressure, and low pressure—on a single shaft. The shaft connects to an 1,800 r.p.m. generator. In designing the turbine, special attention is given to the elimination of crevices and pockets in which radioactive particles could lodge with a further provision for internal washing. See page 16 for full story of Chicagoland—Atomic Capital of the World.



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The Editor's Page

Obstacle To Progress

As shown on page 17 of this issue of *COMMERCE*, construction is well under way on the atomic fueled power plant being built for the Commonwealth Edison Company near Morris, Illinois. There is still, however, one major obstacle to the operation of this reactor or, for that matter, any other reactor of similar size which is privately owned.

The government must provide for federal indemnity against third party public liability in excess of the private liability insurance available to the reactor owner.

Private insurance companies have offered public indemnity coverage up to \$60 million on any single reactor. A bill to provide additional coverage up to \$500 million was introduced in Congress last year. Although there was almost universal agreement as to the need for federal indemnity and almost universal approval of the bill as proposed, it failed to pass because it became involved in the controversy over public vs. private power. The bill was re-introduced in the current Congress and is now pending.

The risk of disaster resulting from an atomic power plant is said by scientists to be substantially zero. Nevertheless, no scientist can demonstrate this without equal extended experience in the operation of reactors, and none is willing to say that the risk is zero. Under these circumstances, no private company could afford to accept this risk, however remote it may be. In the public interest, Congress, which passed legislation permitting private construction and ownership of reactors, should now carry through by promptly passing the pending indemnity bill.

Follow Through Needed

The proposal by President Eisenhower at the Governors' Conference for the states to assume greater responsibility for meeting governmental problems provides a challenge and a constructive course of action for state and local authorities.

Our federal system of government was established on the assumption that all levels of government—local, state and national—would be responsive to the governmental needs of the people.

Where a vacuum exists in supplying these needs, the federal government with its natural tendency to proliferate moves into areas rightly the responsibility of state and local governments. This obvious truth, cited by Mr. Eisenhower, is the underlying reason for our ever-expanding federal government.

In proposing a joint federal-state task force to study

the redivision of governmental functions and financial activities, Mr. Eisenhower was both practical and politic.

Each governor possesses an administrative organization, resources and knowledge of everyday workings of intergovernmental relationships from the state viewpoint as does the President at the national level.

An all-encompassing study of state and local financial systems, their relationship to federal revenues, and the proper coordination of both is long overdue.

It is to be fervently hoped that the President's proposal will spark a general movement by state and local governments to reduce the trend to federal centralization and re-establish the states as strong partners in a virile federalism.

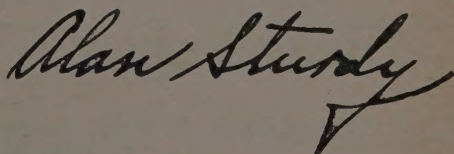
What's ahead for the rails?

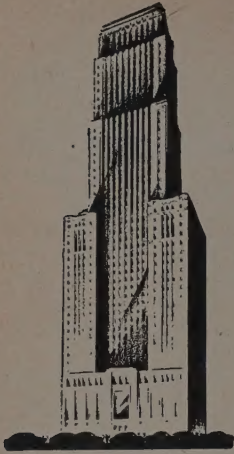
That question serves as the title of an article by William T. Faricy, president of the Association of American Railroads. And it's a tremendously important question—for transportation is the lifeblood of the country.

Mr. Faricy tells of railroad achievements of late years. Billions of dollars have been spent to provide safer, swifter and more dependable service. Everything used in railroading—from the steel rail itself to yards and terminals has been changed and improved.

But the railroads have a fundamental problem bearing on their future—namely, profits. Last year the rate of return on their net investment was 3.95 per cent, the year before it was 4.2 per cent. Mr. Faricy says: "Such rates of return are not sufficient to enable the railroads to continue to make the kind of improvements which will produce better service at lower costs. What is ahead for the railroads in the way of further improvements . . . depends on the way the railroads are allowed opportunities to share in the nation's increased traffic on a more nearly equal basis with other modes of transportation."

This is not a plea for favors. Mr. Faricy brings up the big point in these words: "... the railroads want no special treatment at the hands of the government. They seek nothing more than removal of the inequalities which prevent each form of transport from doing for the public those things which it can do best, all costs and service considered."





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Here...There... and Everywhere

• **Music for the Millions** — The W. W. Kimball Company has published "Music for the Millions," a history of the company and the piano and organ business, as part of its centennial year celebration. Author of the 334-page book is Van Allen Bradley. Price: \$4.00.

• **Fuel for Dresden** — Dresden station (Commonwealth Edison's nuclear power station) will use slightly enriched uranium. A 40-year fuel supply has been allocated by the AEC. The plant will be fueled with 60 tons which will last as long as six years when full efficiency has been achieved. By comparison, a conventional generating station of the same size will burn more than three million tons of coal in six years.

• **17th Annual All Star Luncheon** — The 17th annual all star luncheon which is sponsored by the Chicago Junior Association of Commerce and Industry will be held on August 6 in the Sheraton Hotel. The 55 players and coaches of the All Star Football team, along with 200 orphans and underprivileged children, the All Star Queen, and sports editors of the Chicago area, will be guests at the affair. Tickets for the luncheon are available from the Junior Association.

• **High Fidelity Set Sales** — The High Fidelity phonograph makers expect to sell 1.5 million Hi-Fi sets with a retail unit price of over \$100 each during 1957 according to L. J. Collins, sales manager, of RCA Victor Radio and "Victrola" Division. The industry sold 900,000 such units in 1956.

• **Home Decorating** — Some 600 million gallons of paint will be used in house redecorating this year according to American Can Company officials. They estimate that women will do almost a third of all interior

painting. Some member or member of the family will do the painting. 70 per cent of all interior jobs and in 46 per cent of all the other paint jobs undertaken.

• **The Port of Chicago** — In 1919 shipping companies engaged direct Great Lakes overseas shipping. At the start of the 1957 shipping season this had increased to 24 companies. These are some of the details detailed in a new book-length entitled "The Port of Chicago: The St. Lawrence Seaway," by old M. Mayer, Professor of Geography, University of Chicago. The book is a summary of a ten-year study of the expected effects of the St. Lawrence Seaway on the country and agriculture of the "hinterland." Price \$3.00. Distributed by Geography, University of Chicago or from Bacon, Whipple & Company, 135 S. LaSalle Street.

• **Accepted for Life Insurance** — Approximately 97 out of every 100 applications for ordinary life insurance in the United States are accepted, 9,230,000 of last year. 490,000 applications being accepted by the life companies, the Insurance of Life Insurance reports.

• **See America First** — The 81 million vacationers will spend more than 17 billion dollars in their own country according to a survey made by American Express. Last year vacationers seeing America spent \$16.2 billion. Pennsylvania has joined New York, Florida and New Jersey in the list of states where income from tourism exceeds one billion dollars annually.

• **Another Chicago Centennial** — On June 10, 1957, the Continental Illinois National Bank and Trust Company of Chicago began

(Continued on page 36)



◀ Aero-cycle, a one-man helicopter now being tested by the U. S. Army, is one of the many aircraft for which Aeroaffiliates machines precision parts.

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Trends... in Finance and Business

• **Chicagoland's Retail Market** — The Chicago Loop still leads the city's shopping centers in retail sales with 16 per cent of the city's total. Between the years 1948 and 1954, the central business district, in spite of a five per cent decline in sales, was still far ahead of all other shopping areas. In 1954, it had a total dollar volume of \$714,784,000.

The nearest competitor is the 63rd and Halsted shopping district showing a total sales of \$92.3 million in 1954. This area, although it retained its number two position for total sales recorded, declined 19 per cent in 1954 as compared to its total in 1948. The third largest retail shopping area is Michigan Avenue from North Water Street to Oak Street with a total of \$90.6 million in 1954, or two per cent of the city's total retail sales. This shopping district increased its sales 18 per cent between 1948 and 1954, but still remained behind the Loop area and the 63rd and Halsted district.

The two leading shopping districts show a sales decline of 5 per cent and 19 per cent respectively, while the entire city's total sales volume was up 17 per cent during the six-year period. Of the total 79 shopping districts in Chicago, only eight showed a decline in total retail sales, 12 showed increases of less than five percent, and the remainder increased their sales from 5 per cent to 203 per cent. Eleven areas showed increases above 50 per cent.

These facts are pointed out by Philip M. Hauser, director of the Chicago Community Inventory of the University of Chicago, and Arthur J. O'Hara, vice president of the Business Research and Statistics Division of the Chicago Association of Commerce and Industry, as among

those contained in the recently published 454-page book "Chicagoland Retail Market" (available from Chicago Association, One North La Street, Chicago 2, Illinois. Price \$35.00). The publication includes information on the Chicago area retail trade showing the number of stores, the amount of sales of the establishments, the number of employees, and the amount of employee payrolls, by type of retailing within small geographic areas.

• **Airline Outlook** — In 1955, the number of revenue passenger miles flown by the domestic airlines totaled 22.5 billion, a 100 per cent increase over the year 1951, according to Curtis Barkes, vice president of Finance of United Air Lines. Domestic business has doubled in five years.

"We are forecasting a doubling of volume over 1956 by 1965, or a 100 per cent increase in a nine-year period. This represents a leveling down in the rate of growth to about 20 per cent per year for the past five years to a rate of eight per cent per year for the next nine years," Mr. Barkes told a meeting of the Central States General Investment Bankers Association in Chicago. He added:

"This will give an annual volume of about 45 billion RPM's by 1965. In 1956 the airlines handled 4.4 billion, or two out of every five city passengers handled by all common carriers. By 1965 we forecast that three out of every five city intercity passengers will be handled in the air. Some forecasts are higher than this. For example, the CAA predicts that by 1965 the volume would be somewhere between 42 and 56 billion. The mid-point estimate would be 49 billion."

(Continued on page 41)



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The Calumet Area— Boom or By-Pass?

By JUNE BLYTHE

Chicagoland's last sizeable vacant land area has enormous potential IF . . . ; here's what the "ifs" involve

NO RESPECTABLE Chicagoan would be caught these days without his prescribed pair of rose-tinted glasses. Optimism is all pervading in the Chicagoland air, and, indeed, most of it would appear justified.

But we could miss our date with destiny, warns the former Chicago Plan Commission (now called the Department of City Planning), unless we speed the substitution of shades for pink spectacles and work up heavier calluses on the palms of the body politic.

In an interim report on what could be dubbed Chicago's last great industrial frontier, the Commission staff documents the enormous potential of "The Calumet Region of Chicago"—and the resolute steps that must be taken if the region's promise is not to be by-passed.

Comments Leverett S. Lyon, executive director of the Northeastern Illinois Metropolitan Area Local Governmental Services Commission: "To anyone interested in the Chicago Metropolitan Area, this report will be welcomed as a thoughtful, carefully prepared, well documented statement relating to a section of the area which is at the moment attract-

ing more attention than any other. The study is helpful in recognizing the problems which will accompany the industrial growth forecast, and in implying, at least, that the solution of these problems will involve costs."

The Calumet Area, as defined in the report, extends from Chicago's Seventy-ninth Street to the south Cook County line, and from Joliet to the eastern limits of Gary, Indiana.

Here lies the last sizeable vacant land (5,100 acres) within Chicago suitable for industry, together with 10,000 similarly appropriate suburban acres. Here, now, is found the heaviest concentration of industry and of manufacturing employment in the entire metropolitan area.

Transport Complex

Here is being built an unequalled transport complex of deep-water, barge, rail and highway facilities, opening mid-America to the world. Here is virtually unlimited water for industrial processes and cooling—and plant sites accessible to both deep-water and barge traffic. Here can be located users of basic materials close to their sources of supply—primary metals, petroleum and coal products, chemicals, and stone, clay and glass products.

As for markets, the report notes that the "rich hinterland" of five mid-west states surrounding Illinois contains 29 per cent of America's manufacturing labor force, the largest regional concentration in the nation, and adds:

"Lying at the heart of this area of high production and consumption as well as straddling the transcontinental transportation routes to the rapidly growing western states is Chicago in an unparalleled position for the production and distribution of goods." By 1970, predict the planners, new industrial development in the Chicago portion of the area will utilize some 1,000 acres of now-vacant land, plus another 500 acres of filled land in Lake Calumet.

Using an "employment density" yardstick derived from recently built plants, the report makes admittedly conservative projections for job and population growth. Within Chicago, from Seventy-ninth Street to the city limits, 35,000 new industrial jobs are forecast by 1970, plus 60,000 service or non-basic industrial jobs, generating a population increase of some quarter-million persons. This is in addition to the on-going expansion in the larger portion of the Calumet Area lying outside Chicago.

The Calumet Area now employs one out of every five manufacturing

General view of the Lemont Refinery of the Pure Oil Company. Pressure storage sphere appears in foreground

workers in the six-county (Cook, DuPage, Kane, Lake and Will Counties in Illinois, Lake County in Indiana) Chicago Metropolitan Area. Analyzed by industry, the Calumet Area employs 84.5 per cent of the six-county workers in primary metals; 72 per cent of those engaged in petroleum and coal products; 30.2 per cent of those in chemical and allied products; 29.6 per cent of those in stone, clay and glass products; and 21.3 per cent of those in transportation equipment.

The area's resident labor force of 538,000 (1955) presently is concentrated in south Chicago and in north Lake County, Indiana. But since 1950, the greatest growth has occurred and is expected to continue in south Cook County and the southern half of Lake County, Indiana. More definite projections must await a Metropolitan Economic Base study, strongly urged in the report, and which Commissioner of City Planning Ira J. Bach asserts is being launched.

Many Challenges

But even the cautious projections contained in the interim report, when viewed in the light of existing facilities and the work and planning recommended to expand them, prove highly challenging. Says planning consultant Harold M. Mayer, of the University of Chicago: "The report is the outstanding publication put out by the former Chicago Plan Commission in recent years, and if given the consideration it deserves, it should be a milestone in basic research prerequisite to a comprehensive planning program for the metropolitan area and the city."

Most pressing requirement for the industrial boom to which Calumet is uniquely suited is solution of the several problems besetting portions of its vacant land. For example, land especially appropriate for water-oriented industry, bordering Lake Calumet and the Calumet-Sag Channel, often requires a moderate amount of fill. These and other sites particularly suited for industry, such as along railroad rights-of-way, may be zoned for residential use. Conversely, land at the periphery of communities, sometimes far from freight or dockage facilities, may be zoned for industry. Chicago's new zoning ordinance partially meets some of

the industrial land use needs within the city, but the report stresses that plant-site requirements throughout the Calumet Area must be met by an area-wide land use plan.

Other tracts are plagued by clouded titles, obsolete platting or tax delinquency; still others involve railroad ownership entailing rail tonnage requirements; many, including some in Chicago, lack local utilities. Others lack access, or suffer from conflicts between street, rail, and water routes.

Air Pollution

Air pollution, which the report emphasizes "heavy industry is by no means solely responsible for," blights some industrial as well as residential sections. Only two Calumet communities conduct air pollution control.

Factors such as these could militate especially against "light" and "medium" industry as development accelerates and desirable sites become less abundant. Yet these are precisely the kinds of industries the Calumet Area should seek aggressively to attract, the planners maintain. Beyond the obvious locational advantages close to sources of supply, lighter industries would supply buffer zones between heavy industry and homes, plus the economic advantage of diversification of employment.

The report urges area-wide cooperation on air pollution control, installation of utilities and other public improvements, and elimination of rail-water-vehicle traffic conflicts. Early action, plus a "concerted effort to publicize and promote the area," could avoid what the planners warn is a possibility of "the area never reaching its full potential."

The three current major waterway improvements — St. Lawrence Seaway, Lake Calumet Harbor, and Calumet-Sag Channel — and general metropolitan growth will reinforce each other, says the report. Historically, the Calumet Area's development has been tied to water transport and dockside locations, and even prior to the improvement projects, area harbors and waterways enjoyed rapidly growing tonnages.

In the ten years from 1946-55, the Sanitary and Ship Canal and the Calumet-Sag Channel both trebled their traffic. The Chicago River and

its two branches showed 50 per cent increases; Indiana Harbor doubled its traffic; Gary Harbor rose from 8.6 million tons to 10.5; Buffalo Harbor from .87 million tons to 1.29; Calumet Harbor and River from 13.8 to 24.7; Lake Calumet, (1951) to 1.58.

The Port of Chicago (as defined by U. S. Army Corps of Engineers, excluding the three Indiana Harbors) handled 40 per cent, or 214,000 tons of all Great Lakes overseas general cargo in 1955. Of this, over three-fourths was handled by Calumet River and Lake Calumet terminals. Since then, the first \$24 million stage of Lake Calumet improvement has been completed, and stage two should be underway within months, estimates Maxim M. Cohen, Chicago Regional Port District general manager. Future developments could provide up to 13 slips, vast increased storage and transfer facilities, a 100-acre tank farm, and up to 1,800 acres of man-made land.

The volume of future traffic that will flow through Chicago-area ports cannot now be determined. It will depend on such variables as maximum capacity of the new Lawrence Seaway, tolls, tariffs, and available vessels. The upper-limit capacity of Lake Calumet Harbor, in turn, will be affected by the Calumet River's traffic capacity, and to some degree by the water-land traffic conflict of increased bridge openings.

Coordinate Planning

But in view of the growth trend in water traffic already evident, report recommends "coordinate planning of port and waterway development in metropolitan Chicago which enlists the cooperation of States of Illinois and Indiana, Chicago Regional Port District, city of Chicago, and suburban municipalities."

Specifically, the planners recommend a continuing inventory of port and waterway traffic as compared with capacity; possible full operation of Navy Pier and Chicago Harbor to supplement Lake Calumet; reservation by the city of Chicago of 1,100-foot shoreline just west of Indiana state line for a possible future lake front harbor; and a solution to the problem of barge moorings.

(Continued on page 26)

Chicago Students Earn While They Learn



On-the-job training at Abbott Laboratories during her senior year in high school enabled this young lady to become a private secretary six months after she became a full time employee

Unique partnership between city high schools and local firms gives seniors on-the-job training

By

PHIL HIRSCH

WORK-STUDY," a unique partnership between Chicago business firms and educators, is helping several hundred of the city's high school students prepare for the day when they must leave the cloistered classroom forever and begin the task of earning a living. By giving the students a hand up the success ladder, the companies are helping themselves as well.

Local firms participate in the work-study program by employing the students part-time during their last year of high school. Since 1952, when the plan was launched, close to 3,000 seniors have received on-the-job training. The positions involved range from typist to lab technician, draftsman to social worker. More than 200 firms and organizations have participated in the program. They include Armour & Company, Commonwealth Edison, Continental Illinois National Bank & Trust Company, U. S. Treasury, House of Vision, Valve & Primer Corporation, and Central Steel & Wire Company.



Typical of the detailed on-the-job training provided by most firms participating in the work-study program is this class in meat packaging terminology conducted at Armour & Company

The attitude of both the students and their employers to the work-study idea is indicated by a few figures: the first group consisted of 124 seniors from 18 high schools, who were employed by 44 companies. During the second semester of the present school year, nearly 400 students joined the work-study program from 32 schools. They were employed by 70 companies.

Virtually every participating firm has found that the students like their jobs and surroundings so much they stay on as full time employees after graduation. The youngsters are top-notch workers generally—many have higher-than-average IQs, while most possess superior motivation — so the program often enables a company to skim the cream

(Continued on page 38)

Chicagoland: Atomic Capital of

Commonwealth Edison's Dresden Plant another area first in atomic

By

ADMIRAL LEWIS L. STRAUSS



Admiral Lewis L. Strauss

CHICAGO is more closely associated with man's harnessing of the atom and the development of the peaceful uses of atomic energy than any other city in the world. As such it has a good claim to the title of the atomic capital of the world.

It was in Chicago that Enrico Fermi, true architect of the Atomic Age, lived and labored, where he and his wife became American citizens and where death brought to an untimely halt his enrichment of human knowledge. One of the marks of Chicago's fame is inscribed on a bronze plaque fixed to the wall

of what was once a stadium on the University of Chicago campus. It says, in simple eloquence: "On December 2, 1942, man achieved here the first self-sustaining chain reaction and thereby initiated the controlled release of nuclear energy."

It is the birth certificate of the atomic age—born in secrecy in Chicago that December afternoon of union between war and science, and under circumstances which were most inauspicious for its development in a climate of free enterprise. However, it is not Fermi's great triumph alone which identifies Chicago with the birth, adolescence, and approaching maturity of the peaceful atom.

One of the world's greatest research centers in developing the peacetime applications of atomic energy—the Argonne National Laboratory operated for the Atomic

Energy Commission by the University of Chicago—is located in the metropolitan area of Chicago. It is the Argonne Laboratory which produced three of the five reactor concepts included in the Commission's first civilian reactor development program in 1954. One of the Argonne projects was the boiling water reactor, which developed the technology for the nuclear power plant that is to rise at Dresden.

The first usable amounts of electric power from atomic energy was produced in a reactor designed and built by the Argonne Laboratory. That event occurred in December, 1951, when more than 100 kilowatts of electricity were generated in the experimental breeder reactor at the Commission's National Reactor Testing Station, and used to operate pumps and other equipment to light the reactor building. It was a boiling water reactor—using the same basic principle as the Dresden plant—which in the summer of 1955 became the first to supply nuclear electric power to an entire community. Power from a reactor known as "Borax 3"—again the product of the men of Argonne Laboratory—supplied enough electricity to serve the town of Arco, Idaho.

Fermi's original "pile" under stands at Stagg Field, when the control rods had been removed completely, provided barely enough power to serve a flashlight. "Borax 3" provided enough electricity for a town of about 1,200 persons. The Dresden Nuclear Power Plant, when it comes "on stream

The author is chairman of the Atomic Energy Commission. This article is a condensation of his address at a Chicago luncheon sponsored by the Commonwealth Edison Company. The luncheon commemorated the start of major construction on Edison's Dresden Nuclear Power Station.

the World

power development

With its capacity of 180-thousand electrical kilowatts, will provide enough nuclear electricity to serve 50-thousand people—their homes, industries and transportation facilities.

Chicago is entitled to particular pride, too, in the atomic-powered

(Continued on page 45)



Pouring concrete in foundation of Dresden Station. The country's largest nuclear power reactor is scheduled for completion in 1960. Edison will own and operate the 180,000 kilowatt plant. General Electric is the builder



The first of 20 steel columns for the 190-foot steel sphere was set in place at Commonwealth Edison Company's Dresden Nuclear Power Station, 50 miles southwest of Chicago, on June 12. Assisting workmen guide column are Francis K. McCune (left), vice president of General Electric Company, and Willis Gale, chairman of Commonwealth Edison



Raytheon Manufacturing Company has developed a process for preserving foods. Under vacuum at below freezing temperatures, the food is preserved with the aid of radar microwave energy. After preserving process the food can be stored indefinitely at room temperatures. Above: Lobster tails after treatment



Not a man from outerspace, this is the Army's new E-13 mine protective mask, which is all in one piece, eliminating the hose and canister. It's a development of Mine Safety Appliances Company



Paul W. Goodrich, president of Chicago Title & Trust Company (left), presents a plaque to Arthur T. McIntosh, Jr., to mark the fiftieth anniversary of Arthur T. McIntosh & Company

Chicago Helicopter Airways' newest helicopter. It has a cruising speed of 120 miles per hour and a seating capacity of 12. It is now in daily use on the regularly scheduled shuttle runs between Chicago's three airports



Highlights



Naturally after they felt the pulse of Chicago ("Miss Chicago" what is), these medical students from five different U. S. cities decided that the 1958 convention of the 50,000-member Student American Medical Association should be held in Sandra Stuart's hometown, Chicago



Skilled human fingers wire small, circular core units that serve as "nerve" cells for a new switch that is expected to stimulate assembly-line automation. Developed by Minneapolis-Honeywell's Doelcam Division, the laminated iron cores replace bulky amplifiers in the switch's magnetic circuitry

Guided by signals from a stevedore boss, an English-built Ford car is swung ashore at Calumet Harbor. It is one of 88 cars in the first shipment of made-in-England cars to arrive via the Illinois water route



Taking part in the recent ground breaking ceremonies for the one million dollar addition to the Metals Research Building at Armour Research Foundation of Illinois Institute of Technology are: left to right, Robert A. Lubker, manager, metals research department; Dr. Haldon A. Leedy, ARF director; Dr. John T. Rettaliata, IIT president; and Alex D. Bailey, vice chairman of the IIT board of trustees





A noiseless electronic refrigerator, with no moving parts, has been developed by scientists of the Radio Corporation of America



Panels no thicker than window glass line this room, providing light from man's newest and most promising light source — electroluminescence, a Westinghouse development



A home television tape player (center), which reproduces pre-recorded black-and-white television selections on a standard TV set, another RCA development

Electronics—the Magic Key

The pushbutton world of tomorrow
of the amazing

DURING recent years many products have been produced by the electronics industry — color television, electronic computer, closed-circuit television, direct dialing of telephone numbers, and many others — but experts in the field say this is only the beginning.

For example, Bell Telephone scientists predict:

"Ultimately, at the time of birth each individual will be assigned a telephone number which he will use through life just like his name. The telephone, similar to a watch, will be attached to his wrist. The front part will be a transmitter-speaker, and the rear a three-dimensional picture of the individual to whom he will be talking. At any time when he wishes to talk with anyone in the world, he will pull out the device and punch on the keys the number he wants. Then, turning the device over, he will hear the voice of the individual he is calling and see his face on the screen — in color and in three dimensions."

Forerunner In Operation

A possible forerunner of such a telephone, the "Data-Vision," has been installed by Bell in the Philadelphia National Bank to enable branch tellers to compare visually a signature on a check presented for payment with the master signature

The author is executive vice president of Television Shares Management Corporation. This article is a condensation of a recent address before the Central Club of Chicago.

to a New, Wonderful Life

is taking shape today; here are some things to come

By

PAUL A. JUST



Paul A. Just, executive vice president of Television Shares Management Corporation

le in the bank's main office more than a mile away.

The existence of such an instrument of communications, supplanting the existing telephone and other media, will completely change our way of life — both in business and at home. But that's not all that electronic scientists have to promise for the future. We've already heard about some of the things to come — not so long ago RCA announced the wireless electronic refrigerator, with no moving parts; electronic air-conditioning; and an electronic tape recorder to bring TV viewers their favorite television programs whenever they want them. Westinghouse announced, around the same time, the application of electroluminescence which would light up homes

from wall panels, rather than from conventional lights and lamps.

But beyond these things, the scientists promise us that the home itself will be automated, through electronic devices and controls. In fact, they say the home of the future will clearly have a communication center. This will involve a panel control board similar to those now used to control the gigantic automation machines in auto and other factories. It has already been given a name — the Communicenter.

The techniques for such a Communicenter in the home are now known. Here is how the president of the American Institute of Electrical Engineers describes its function:

"Imagine that tomorrow's plan for the day is about to be set up by

the usual Adam and Eve team. Susie is to wake at 7 with sentimental chamber music. Junior must be blasted out with a stirring martial air. Aunt Maggie's window must be down at 4:15 a.m. and her coffee must approach boiling at exactly 6:45. At breakfast, Susie's facsimile news must be set for her fashions; Junior's for the baseball scores, mother's for the social items. Mother's car must be warmed up at 9, the garage doors opened and the snow off the driveway. And so on — until Pop's electric blanket goes on at midnight and the cat-ejector has done its duty. That complete program will be put on a recording tape, buttons pushed, and the day's program is taken care of."

(Continued on page 43)



rapped to this soldier's hat is the smallest walkie-talkie FM radio ever built. It provides two-way communication over a quarter-mile



Bell Telephone Laboratory technician demonstrates an experimental model of picture-phone



From the Executive



Above: "Study"; right: "Forms"; both abstract paintings in oil and encaustic by Arthur Rissman. They are part of the exhibit "From the Executive's Easel." Mr. Rissman has exhibited in other shows including a one man show as Painter-of-the-month at the Esquire Theater

Below: "Interrogation" and "Organ Grinder"; both oil paintings are by Angelo Poulakidas. Though he has been painting for only a short time, he was won first prize and honorable mention in the Chicago Bar Association art exhibit



Easel



At the Chicago display of the exhibit are, left to right: Frank Holland, art critic of the Chicago Sun-Times; Aaron Scheinfeld, chairman of Manpower; Elmer L. Winter, president of Manpower; and the three Chicago artists, Milton P. Mathewson, Arthur Rissman, and Angelous Poulakidas

By **TOM CALLAHAN**

*In framing an artist, art hath thus decreed,
To make some good, but others to exceed.*

Pericles Act II Sc 3 L 15

THREE Chicago executives — a merchant, an attorney, and a hotel sales manager—have taken issue with the above lines written by one or both of the two English poets, William Shakespeare and George Wilkins (historians have not been able to agree on which one wrote *Pericles* or if they collaborated on it). For the trio have proved themselves "good artists" and at the same time "to exceed" in getting themselves away from the strains of their successful business careers.

The three Chicagoans are Arthur Rissman, president of Jerrems, men's clothing stores; Angelos Poulakidas, attorney with McNamara, Wright, Greene and Nordstrand; and Milton P. Mathewson, sales manager for the La Salle Hotel. The proof of their art ability is contained in six pictures now on a two-year, cross-country tour, in a 38-picture exhibition called "From the Executive's Easel."

Sponsored by Manpower, Inc., nationwide temporary help service, and circulated by the American Federation of Arts, the exhibition



Above: "Shipwreck"; below: "Sundown"; both oil paintings by Milton Mathewson. He has had many private shows and has exhibited at the Palette and Chisel Academy and also has had a one man show as Painter-of-the-month at the Esquire





A. M. Castle & Company's new warehouse and office in Franklin Park



The grinding department with the 96" Blanchard in the background

A. M. Castle & Company, steel distributors, has completed its move from its crowded Chicago headquarters on Goose Island to its new 400,000 square foot plant in Franklin Park, Illinois (above). The new building is constructed of brick and has stainless steel sidings and translucent plastic panels. It consists of five bays, four of which are 100 feet by 700 feet and one which is 110 feet by 700 feet. In addition the company has enough additional land area to duplicate present facilities. In the new quarters, A. M. Castle is offering a new service, a complete grinding department. It is pictured above—on the left are two 48-inch grinders and in the background, a 96-inch Blanchard grinder, the largest of its kind made. The 96-inch grinder will surface grind lighter plates up to 84 inches wide and $\frac{3}{4}$ inch plates and heavier plates up to 96 inches wide.

offers proof that business and professional people are producing exceptional work while utilizing painting as a hobby to escape from the tensions of their business activities. It was conceived by Elmer L. Winter, president of Manpower, Inc., who is also an amateur painter and art enthusiast.

Having derived so much personal fulfillment from the expression of his creative talents as a "Sunday" painter, Mr. Winter reasoned that by bringing together the top ex-

amples of the work of similar "Sunday" painters as a dramatic example of what can be accomplished, others might be encouraged to follow suit.

"In the world of art the executive can find a refreshing freedom," says Mr. Winter. "Whether he paints realistically, or chooses to delve into the abstract, there is no one to check or restrain him by reference to group decision, manuals, or operating memoranda."

When do these busy men find time to paint? Attorney Poulakidas paints

after midnight when his family is asleep. He reports that frequently he gets so carried away that he paints all night. He has never had any formal art training and uses any available corner in his apartment for his studio.

Merchant Rissman, on the other hand, had planned to be an art teacher and has had a good deal of art instruction. The deaths of his father and brother forced him to leave the family business. However, he plans his work schedule so that he can paint perhaps two days a week in his studio away from his home. He also utilizes any free time on his frequent business trips for sketching.

Hotel sales manager Matheva likes to paint portraits but finds it difficult because he does not have a studio. As a result he does mostly landscapes and frequently paints scenes around Galena, Illinois, Rhode Island, and Quebec, Canada. He has been painting for many years and as a youth won several scholarships. His personal economic situation forced him (some 30 years ago) to enter the business world which he did with a job at the LaSalle Hotel and has been there ever since.

38 Paintings on Display

The exhibition — From the Executive's Easel — contains 38 paintings and represents the hobby work of engineers, physicians, attorneys, and other nonart professionals and executives. A jury of seven art museum directors selected the paintings in the exhibit from a collection of entries submitted from all over America. It will be shown in many cities around the country in banks, department stores, lobbies of office buildings and anywhere else that a large number of lay people can view it.

In the words of Frank Hollaender, art critic for the Chicago Sun-Times: "As might be expected, the show ranges from highly professional work to the very naive, primitive type; and all is interesting."

Interesting to those who view the exhibit and thereby gain freedom from some of their own daily tensions; and perhaps, inspirational to others who might acquire a brush and palette of their own and eventually become good artists and "creeders" themselves.

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Calumet Area

(Continued from page 14)

ment from the inland waterway to the Indiana harbors.

"Very pertinent" to Lake Calumet Harbor's future growth, says Port District Manager Cohen, is the planners' recommendation for additional service by more railroads. The west and south sides of Lake Calumet are served by the Chicago, Rock Island and Pacific, but the east side presently has no rail service. The report's section on transportation facilities and relation to land develop-

ment terms "imperative" an early decision on the applications of the several railroads seeking to provide access and switching services "if the full potentialities of the port development are to be realized."

"A review of the boundaries of the Chicago Switching District . . . with a view toward their revision and extension," also is recommended. Citing the Switching District's advantages to industrial development, the report points out that its boundaries

were established many years when industry was concentrated much closer to the heart of Chicago and have not been materially revised. Growth outside the district since has been extensive, leaving outer portions of the Calumet beyond district benefits, so that the district constitutes an "artificial force" tending to constrict development.

However, many kinds of industries increasingly are less dependent on rail access, the report notes, illustrated by the fact that in American railroads, for the first time, carried slightly less than the total ton-miles of freight by motor. Though rail freight has not shown an actual decline, the increase in ratio dramatizes the growth of trucking. "This places even greater stress than before," the plan comment, "upon the provision of good local access streets and highways, for expressways, by their very nature, cannot provide access



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Heavy Development

Heavy development, both industrial and residential, is planned along such expressways as the Indiana Toll Road eastward to Lake Michigan, the Calumet Expressway, and at numerous locations along the Tri-State Toll-Way, such as Thornton, Hammond, Blue Island, Alsip, and Chicago Ridge. These and other Calumet expansions could swamp the report terms "a pigmy street transit skeleton."

A study of Chicago's Lake Calumet Area street traffic, for example, finds many streets and interstates already perilously near or beyond their capacities. By 1970, additional capacity will have to be provided for more than 13,000 new east-west vehicles per hour (one way) at peak hour, and almost 16,000 south vehicles per hour (one way). For purposes of comparison, the report notes that 16,000 vehicles constitute more than eight times the present load on Doty Avenue.

Far from solving this coming traffic flood, such new expressways as the South Route, Calumet Skyway, and Stony Island Improvement will burden local traffic with additional loads which cannot yet be met by Expressways in themselves generating additional traffic. The study projected increases are based solely on probable industrial and p



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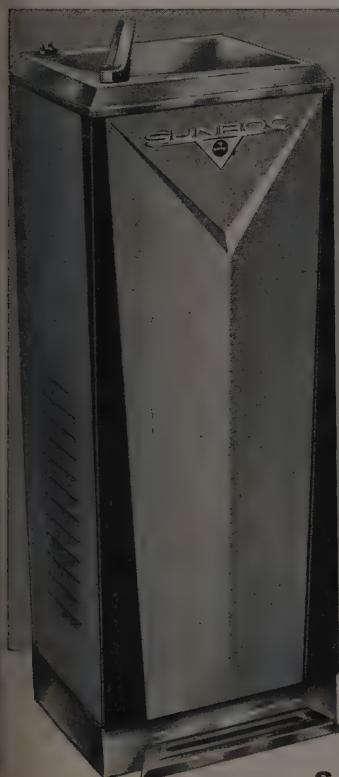
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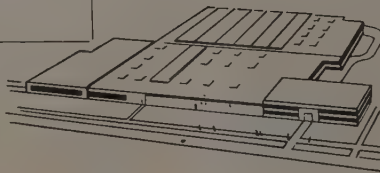
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velopment within a corridor around Lake Calumet, and do include even greater increase expected to ensue from sub growth.

Mass transit provisions will require adaptation to such Chicago Area characteristics as scattered plant locations, and feeder bus serve existing suburban railers are suggested as one solution. ers include express bus lanes, highways; the rapid transit n strip already being considered the South Route Expressway extension of Chicago Transit authority rapid transit service so Sixty-third Street to the Lake met area.

U. S. Civil Air Traffic Forecast indicate that Chicago will ne third airport of intercontinental classification, report the plan who suggest that the new facility located south of Lake Calumet complement O'Hare Field to the west. The new airport, they maintain, should be approached on a metropolitan basis, with costs to be by municipalities, and su land to meet future needs re "considerably before balance ration is reached at existing ports."

Tight Labor Market

In an earlier report on *Chicago Industrial Development*, the Commission listed the tight labor market as a limiting factor to all potential industrial expansion in the metropolitan area. More recently the Illinois State Employment Service cited the housing shortage in the metropolitan area's three counties as a factor limiting recruitment.

Pointing to the vigorous manpower recruitment program of the Chicago Association of Commerce and Industry, the report of Thomas H. Coulter, Chief Executive Officer: "Unless there are qualified workers here to meet industry needs, this growth might be choked off. The mortgage industry here have been advised to immediately find money to step up the potential building rate . . . We continue to grow without the people, and we can't get the people unless we are prepared to have housing, schools, and other facilities for them."

Medium" projections indicate a Chicago-area growth of about 1.2 million persons by 1970, for a total of 7.19 million compared to 5.98 million in 1955.

The Calumet Area's share of this increase can be considered realistically in terms of reasonable, maximum journey-to-work time. To this end, the report maps a "Thirty-Minute Travel Zone," which includes 90 per cent of employees' homes in Calumet industries sampled for the study. The Thirty-Minute Zone extends roughly from Chicago's North Avenue, southwest to Tinley Park, and to Crete in Will County, and northeast to Ogden Dunes just beyond Gary, Indiana.

Population Gain

The quarter-million population estimated to generate from new Chicago-Calumet industry represents about one-fifth of the total predicted metropolitan growth by 1970. The planners expect that about half this quarter-million will live in Chicago and about half in the suburbs, but virtually all will reside in the Thirty-Minute Zone.

To help anticipate the impact on existing housing and community facilities, and formulate suggestions for orderly expansion, the report brings together exhaustive data on affected Chicago neighborhoods in the suburbs, and on the characteristics of present residents. Among the findings, freely summarized, are: The Calumet Area has a much greater concentration of manufacturing workers than the rest of the metropolitan area.

The Calumet Area contains diverse income levels, including some of the lowest incomes of the city and suburbs, as reported by census tract. The Thirty-Minute Zone, in 1950, had 43.8 per cent of the metropolitan area's population, and, 88.8 per cent of its nonwhite population.

Dividing the Thirty-Minute Zone into three areas, Area I, north of Seventy-ninth Street, contains 75 per cent of the area's rental units. It also has the lowest median rentals, the largest number of sub-standard dwelling units, the lowest median incomes, and three times the population of the other divisions, or 62 per cent.

Area II, from Seventy-ninth Street to the city limits, has several neighborhoods with high percentages of rental units, higher incomes

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than Area I, and fewer neighborhoods with large numbers of sub-standard dwellings. It contains 17 per cent of the travel zone's population.

Area III, south Cook County, has only eight per cent of the zone's population, but has shown the fastest growth — an increase of 44 per cent in dwelling units since 1950, more than double any of the other three Areas. Median incomes are slightly below those in Area II.

Area IV, Lake County, Indiana, has 13 per cent of the zone's population, with median incomes comparable to Area III. Areas III and IV combined show 22 per cent sub-standard housing, compared to 19 per cent for the total metropolitan suburban ring. Only 2.3 per cent of dwellings built in these two areas from 1950-55 were multiple family, or presumably rental units.

Live in Area I

Based on wage levels, ethnic background, vacant residential land and existing housing supply, the planners estimate that 30-35 per cent of the new quarter-million persons will live in Area I, north of Seventy-ninth Street; 20-30 per cent in Area II, south of Seventy-Ninth Street; 25-30 per cent in south Cook County; and 15-20 per cent in Lake County, Indiana. (As throughout, these projections do not include suburban-job population gains, or normal accruals from births over deaths.)

Thus, the planners conclude, the heaviest impact on rental housing will be felt in the areas where the most rental housing exists (in Chicago and especially north of Seventy-ninth Street.) Workers able to purchase single family homes will account for the estimated suburban residential location. The study notes Illinois Department of Labor figures reporting the pay scale of almost 90 per cent of the Calumet Area labor force ranged from \$88 to \$113 average weekly earnings in August, 1956.

From this analysis the planners list among the chief development needs:

"An increase in the supply of housing, both rental housing and owner-occupied housing, for all income groups.

"A realistic examination of redevelopment efforts, urban renewal efforts and possible rehabilitation programs.

"Adequate standards for the community development to provide necessary schools and other community facilities and to help provide the creation of future slums.

"An appraisal of the tax problems that will be accelerating Calumet Area development."

Substantial agreement with and other findings of the report voiced by many Calumet leaders. Says Hjalmer Johnson, Inland Company's vice president of manufacture, "the report's estimates are realistic — there is an acute housing problem all over the Calumet Area."

Pullman Trust and Savings president Donald O'Toole comments, "I have never seen a good job of finding out what is developing in an area, and we are much in agreement with the conclusions reached. The suggestions bring in lighter manufacturing, especially steel-using industries, is a good one; so is the idea of planning now for a third airport. We will spend a tremendous amount of money and effort to obtain a central planning agency and establish a basic land and land use plan for the Calumet area."

The first step toward updating zoning in Cook County is underway with a \$100,000 zoning study. County zoning affects only unincorporated areas, and the municipalities, who author their own ordinances, reflect varying attitudes.

For example, Lynn Brenneisen, president of the voluntary Regional Association of South Cook Counties, representing 15 communities, says, "Some of the areas along the Calumet-Sag Channel do not appear to become heavily industrialized. And there appears to be a good deal of educated difference of opinion on such zoning."

Housing Needs

Regarding housing needs, Brenneisen maintains that many municipalities "rather resent the implication that the residential character of Cook County must be downgraded to take care of the new labor force. He underscores the municipal base problems raised in the study by asserting that lower-cost housing boosts municipal service costs in relation to tax revenues.

There is general agreement, however, Brenneisen states, on the need

all planning, which his association has neither funds nor staff to form. Area communities vigorously supported in the legislature Randolph Commission bill for establishment of a metropolitan planning agency.

In Lake County, Indiana, the Purdue Calumet Development Foundation provides a source for area planning assistance in addition to carrying out its initial housing redevelopment program in cooperation with East Chicago. The housing program will provide 1,900 lower-rental units, with the first, 86-unit structure now nearing completion. Some 600 sale homes are contemplated.

Foundation Director Thomas S. Sasa reports the Lake County area does not appear ready to embrace regional planning as such, but the foundation is engaged in numerous specific planning jobs under contract with municipalities.

Back of Yards Council

In Chicago, a voluntary neighborhood organization, the Back of the Yards Council, is moving to test a low-cost single-family house designed by Building Commissioner George L. Ramsey, and cited in the Calumet Area study as one possible solution to labor force housing needs. Ramsey has contributed his services, and the Council is working with architect Frank J. Lapasso on construction of six adapted designs. Construction costs, Lapasso believes, will be held around \$10 per square foot or some \$12,000 for the most expensive of the three-bedroom homes, inclusive of land and fees. The designs have been adapted to fit the 25-foot lots predominant in the Back of the Yards, and Joseph B. Sasa, council executive secretary, says they also may help solve the chronic problem of residential use of narrow vacant properties.

Among Chicago's official agencies, the report's implications for re-examination of urban renewal efforts in housing supply appear to be recent for programmatic extension. The Community Conservation Board's just-voted \$10 million bond issue will be allocated to four conservation projects already committed and will permit initiation of programs in eight to ten additional neighborhoods. "We

(Continued on page 41)



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Industrial Developments

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DURING the month of June, there were 24 industrial development projects announced totaling \$136,000. These projects included and expanding industrial buildings, and acquisitions of land or buildings for industrial purposes. In June of 1956, the developments amounted to \$26,494,000. In the first six months of 1957, there have been 156 projects announced, totaling \$100,000, while in the first six months of 1956, there were 190 projects totaling \$381,814,000.

The 6-month total for 1957 is more than seven of the preceding four years of 1946-1956. It was exceeded only in four years — 1951, 1955 and 1956. The last two of the breaking years — 1955 and 1956 — have seen some enormous projects started which will not be completed until 1958 or 1959. There is a boom in the industrial construction activity, the Chicago Metropolitan area is experiencing a very high rate of construction.

Ammons Company, New York City, manufacturer of the famous "Hida" mattress, the Hida bed, and other sleeping equipment, is erecting a large new plant in Muncie, Ind. (near Gary) which will contain 369,000 square feet of floor space. This large unit is expected to be completed about the end of the year and is being erected by the Ammons Company.

Land Container Corporation, Indianapolis, Ind., will erect a plant containing 140,000 square feet of floor area on 35 acres of land at Chicago Avenue and the Chicago Western Railway Company's yard in Leyden township. The firm manufactures corrugated containers and will employ approximately 250 men. On the completion of the plant, the company will have

12 box plants and two corrugated mills east of the Mississippi River.

• **Pittsburgh Plate Glass Company** has started construction on a large warehouse and office building at 48th St. and Kilbourn Ave. The one-story building will contain 125,000 square feet of floor space, and is specially designed for the distribution of the company's paint and glass products. The building will be located on a five-acre tract fronting on Kilbourn Ave. The company has recently concluded construction of another new warehouse building in Gary, Ind.

• **Chicago Planograph Company**, 1220 W. Van Buren St., has acquired a building of 46,000 square feet at 1112 N. Homan Ave., to which it will move its entire operations. The building stands on an 86,000 square foot site. William J. Krugly and Sudler and Company, brokers.

• **Sunbeam Corporation** is adding 45,000 square feet of floor area to its plant at 5400 Roosevelt road. The new addition will be used in the production of die castings and plastics moldings. The company is tooling up for the production of a series of new products, the precise nature of which has not been revealed.

• **Motorola, Inc.**, 4545 W. Augusta Blvd., has acquired a one-story building at 4900 W. Flournoy St. which will be used for assembly purposes and warehouse space. J. J. Harrington and Company, broker.

• **Water Tube Boiler & Tank Company**, 140 W. Root St., has purchased a one-story building on nine acres of land at 2245 W. 43rd St. The newly acquired structure contains 122,000 square feet of floor

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Whitlock and Company, Inc.'s new office and plant at 7425 W. Lake Street, Forest, Illinois

area, and will provide room for future expansion. It will occupy the newly acquired building after the first of the year. The company manufactures heat exchangers, steel tanks and stacks, and does plate fabricating. J. J. Harrington and Company, broker.

• **Meat Industry Suppliers, Inc.**, 4300 N. Ashland Ave., is moving to the new plant it is building in Northfield. The company manufactures food and meat seasonings and will occupy the new 50,000 square foot building which is at 770 Frontage Road facing Edens Expressway. The firm's experimental kitchen will be visible from the highway. The company's affiliate, Tray Bon Corp., will also occupy the new premises.

• **Murphy and Miller, Inc.**, 1326 S. Michigan Ave., is erecting a new plant in the near west side industrial district of the Chicago Land Clearance Commission which will contain 42,000 square feet of floor area. The plant is scheduled for completion in 1958 and will be located on Taylor Street between Jefferson Street and Desplaines Avenue. The company is a manufacturer of low temperature equipment and will move its entire operation to the new building when it is completed. W. Fred Dolke, architect.

• **Western Rust-Proof Company**, 2137 W. Walnut St., is erecting a 40,000 square foot plant on which

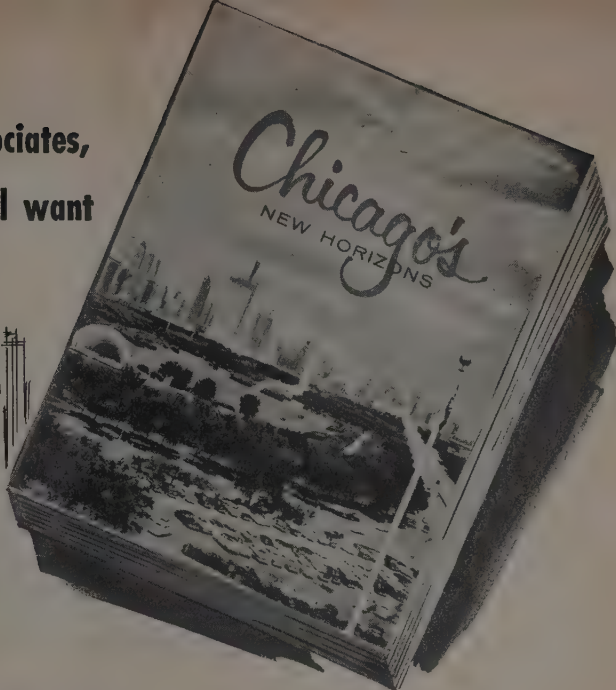
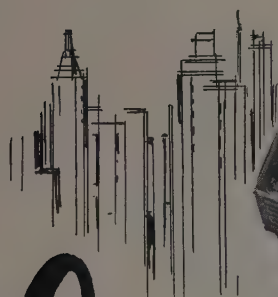
work will be started some time at the beginning of the year. The 60,000 square foot site fronting Waveland and Kilbourn avenues. B. J. Felbinger and Company, broker.

• **Chicago Bridge and Iron Company**, 1305 W. 105th St., will occupy the building at 9535 S. Cottage Grove Ave. which is being vacated by Chicago Bridge's subsidiary Guardite Corp., and will add 50,000 square feet of floor space at the Cottage Grove plant. This unit will be devoted to production and storage. Guardite is erecting a 100,000 square foot plant near White Oak, Ill. Architect for expansion of the Cottage Grove plant is John S. Szymiec. Joseph Haigh and Sons, general contractor.

• **Pullman Steel Warehouse** Co., a newly formed organization, has purchased two buildings containing 40,000 square feet of floor area on a site of 5.5 acres at 108th St. and Langley Ave. This newly formed steel warehouse company expects to have room for expansion at the site, which will call for additional buildings at a future date. O. and Farwell, Inc., broker.

• **W. M. Welch Manufacturing Company**, 1515 Sedgwick St., has acquired the five-story and basement building at 350 N. Ogden Ave. containing 85,000 square feet of floor area. The company manufactures

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• **E. J. Frank Manufacturing** pany, 2700 W. Superior St., has chased a 30,000 square foot bu at 5728 W. Armitage Ave., p which will be occupied immed for its general offices and The company operates a ma shop. Van C. Argiris and Com broker.

• **Joslyn Manufacturing and** ply Company, 3700 S. Morgan adding 19,000 square feet of area to its plant. The company ufactures transmission line ment. It also operates other cago area plants in Franklin Joliet and has an operation in Southern Illinois. Shaw, and Dolio, general contractor.

• **Johnson Fireproof Door** pany, 3925 N. Elston Ave., is adding 20,000 square feet of floor space to its plant for increased production area. Melvin A. Nelson, architect.

• **Rubank, Inc.**, 5544 W. Armitage Ave., is adding 15,000 square feet of floor area to its plant which will be devoted to warehouse facilities. The company publishes books on instruction and school texts. Stein and Sons, Inc., architect and engineer.

Here, There and Everywhere

(Continued from page 8)

and century of service to Chicago and the nation. Continental National Bank's eighth largest commercial banking facility and is a member of over the 100 years of more than 100 banks, savings associations and other financial companies. The bank's 1956 report showed capital funds of \$25 million, deposits of \$2,496,000 and total resources of \$2,769,000.

• **Divers Make Sales Splash** Factoring has given rise to a multi-million-dollar business, with equipment makers riding the crest of the biggest wave of dollar volume, according to Meinhard & Co., Inc. This year, says the factoring firm, thousands of 400 different types of skin equipment will gross over \$100,000.

Transportation and Traffic



THE Interstate Commerce Commission, in its report and order in S. No. 6646, Increased Demurrage Charges — 1956, authorized the nation's railroads to increase demurrage charges on freight cars to \$4.00 per day for each of the first four chargeable days and \$8.00 per day for each succeeding day. Present demurrage charges are \$3.00 for each of the first four days and \$6.00 for each succeeding day. By suspended orders filed to become effective September 1, 1956, the railroads proposed to increase the current charges to \$4.00 for each of the first two days, \$6.00 a day for the next two days, and \$10.00 per day for each succeeding day. The proposal of the carriers to reduce the number of cancellable debits which may be offset by credits under average agreement from four to two was rejected by the commission. The order authorizes railroads to include Saturdays, Sundays and holidays in computing demurrage charges after a car has been held four working days, or two days beyond the free time. The rules and charges approved by the commission will become effective July 1, 1957, on 10 days' notice.

A. B. Approves \$3.00 Penalty for "No-show" Passengers: In an attempt to resolve the "no-show" problem that exists among the U. S. domestic scheduled airlines, the Civil Aeronautics Board June 10 approved a three-part corrective measure proposed by the members of the Air Traffic Conference of America. In its action the board approved the institution of a \$3.00 penalty on all passengers who fail to use or cancel an airline seat reservation. A charge of \$3.00 would be assessed on all passengers on any of the three U. S. scheduled helicopter airlines for no-show reasons. These penalties will become effective September

15, 1957, and expire no later than August 1, 1958. The failure of a passenger to cancel or use reserved seat space, the board explained, poses a serious economic and service problem to both the airlines and all air passengers. Many times a fully booked flight will take off with empty seats that could be used by other passengers, because prior seat reservations were made by persons who failed to pick up or cancel their reservations. The remaining two measures proposed by the airlines and approved by the board are: (1) continuation of the minimum time limits within which passengers must pick up tickets or lose their space; and (2) requirement that passengers reconfirm intent to use reservations, under certain circumstances, at least six hours before scheduled departure.

• **Postpone Iron and Steel Minimum Rate Order to August 15:** The Interstate Commerce Commission has postponed from July 1 to August 15, 1957, the effective date of its order in MC-C-1510, Iron and Steel Articles — Eastern Common Carriers, and MC-C-1629, Iron and Steel Articles — Eastern Contract Carriers. In the order, the commission prescribed minimum motor carrier rates on iron and steel articles in eastern territory. It established rates subject to a minimum weight of 30,000 pounds based on a distance scale as the minimum reasonable rates and ordered that rates for any lower minimum weights be based on the same scale plus 15 per cent. Postponement of the effective date was prompted by a number of petitions which have been filed for reopening, reconsideration, modification and postponement of the order.

• **Increased Parcel Post Rates** Docketed as No. 32158: The Interstate Commerce Commission has

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docketed the petition of the Postmaster General for increases in 4th class (parcel post) mail rates as No. 32158, Increased Parcel Post Rates, 1957. The matter has been assigned to Commissioner Mitchell and the time and place of hearing will be announced later. The Supplemental Appropriations Act of 1951 requires that the Postmaster General, before withdrawing funds appropriated to the Post Office Department from the general fund of the treasury, must first certify that he has requested consent of the commission to establish rates on fourth class matter sufficient to pay the cost of performing the service.

• **Senate Passes Bill to Amend Section 22 of Act:** The Senate on June 12 passed S. 939 which would require that reduced transportation rates for the government, under Section 22 of the Interstate Commerce Act, be submitted to the Interstate Commerce Commission and there be open to public inspection. This would not apply, however, if a gov-

ernment agency indicated that disclosure of a Section 22 rate would endanger the national security. The House Interstate and Foreign Commerce Committee on the following day, June 13, voted to favorably report a similar bill, H. R. 3233, with an amendment which would exclude shipments of household goods from reduced rates under Section 22.

Chicago Students

(Continued from page 15)

off the upcoming labor crop, even before graduation day.

Commonwealth Edison Company has employed work-study students since the program began. To date, approximately 90 high school seniors have been shown the ropes in a number of its departments. At least 90 per cent of them have remained with the firm as full-time employees after graduation, officials report.

A work-study student who stays on after graduation usually is much

easier to train than a new employee hired from the general labor force, he adds. Reason: during their study days, students become familiar with basic company procedures, forms, and organization. They have the job only about four hours a week, so it's not impossible for them to learn the details. But, as full-time employees they have a considerable advantage over beginners who start with a company in permanent position.

Continental Illinois National Bank & Trust Company, an charter member of the program, has given part-time jobs to more than 300 work-study students. "A majority are now employed full-time," reports Assistant Personnel Manager Mary H. Lindley. The aptitude of the students is so high, she says, that the bank is able to promote them automatically as soon as they graduate from school and start full time. In many cases, it's a long time before they have received second promotions. Seven girls came to Continental through the work-study program a few years ago and are now secretaries to vice presidents. Some girls from last year's group, meanwhile, have become secretaries to second vice presidents.

Work-Study Program

Abbott Laboratories and other high schools located near its Chicago headquarters set up a work-study program modeled after the Chicago plan in 1953. Since then, three other schools have joined the program. Now, students are now full-time employees of Abbott's initial work-study program. When they become permanent employees after graduation, it took these girls only six months to win their present positions. Normally, explains Personnel Director Earl M. Bauby, the company must spend three or four years training a girl before she's ready to fill such a position.

Two other girls exhibited such talent that company officials encouraged them to go to college. One is studying law, the other chemistry. The company is particularly proud of these students, since they have no particular careers in mind when they entered the work-study program.

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ational opportunity as well as
Abbott — and most other firms
ating the work-study idea — have
zed important public relations
fits. The student inevitably tells
friends and family about the new
which builds the employer's
tation as a good citizen. Often,
friends may be in the market
jobs themselves, and the build-
plants a seed that soon bears
. At one Chicago firm, a work-
y student talked about her typ-
job in such glowing terms that
of her friends appeared at the
nnel office after graduation. All
hired, and are now turning in
e-average performances.

Help-Wanted Columns

o company, however, goes into
program hoping to erase its
endency on the help-wanted col-
s. Says one employment man-
"We hire hundreds of people
ir; we have an average of about
work-study students per semes-
Smaller firms, although their
nnel requirements are more
est, are still in approximately
same boat, since they take,
y, no more than a couple of
rs at a time.

the other hand, most partici-
g companies are confident that
hiring picture is better off
work-study than without it.
is an advantage in getting
w employe with better-than-
age motivation and/or intelli-
that isn't shown if you consider
the numbers of individuals in-
d. Says Miss Lindley, of the
ntinental Bank: "We are con-
e: that the direct benefits to us
ufficient to justify the extra
st of training work-study stu-
n."

ere is also the benefit to the
nt, which is sizeable in many
e. A typical example is one
y lady who was able to correct
mber of flaws in her typing
lique with the help and en-
gement of a supervisor at the
ny where she worked. The
visor not only spent a lot of
with the girl on the job, but
advised school officials, who
able to give the student some
l work in class. Significantly,
tudent came back as a full
employe after graduation and

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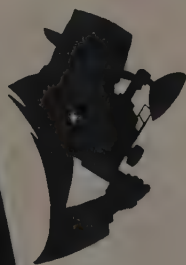
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is now a top executive's private secretary. Files of the Board of Education are loaded with any number of similar stories.

Says William Reich, the Board of Education official who supervises the program: "Work-study provides practical on-the-job experience which the school cannot hope to supply on its own. Even more important, by being in a job situation, many students gain maturity. They become more outgoing, find added motivation, acquire neater work and personal habits, and think long and hard about careers. The direct

stimulus of a real job and a real paycheck is needed to generate these desirable attitudes in some students, even if the job is only part-time."

Enrollment in the work-study program is strictly voluntary. Any first- or second-semester high school senior is eligible, provided he isn't planning to go to college. School officials feel that the student who enters the business world right after graduation is the one who will benefit most from the program, which is why they impose the latter limitation.

Those seniors who volunteer are

interviewed by a school counselor who checks grades to make sure a job will not impose too much of a strain. Then the student's abilities and interests are analyzed to find type of work that would be best. After these preliminaries, the student is interviewed by one or more companies with appropriate positions available. Personnel representatives of these firms are free to accept or reject each applicant.

Each company participating in the work-study program determines what jobs will be assigned to students ahead of time, then obtains the approval of school officials. Educators' only major requirement is that each position must provide as much study as work opportunity.

Each job lasts one semester or less. During this period, school counselors visit the companies to see how their charges are doing. Each student earns one credit for each semester of work-study successfully completed. While enrolled in the program, he takes three major subjects at school instead of the usual four. Schedules are arranged so that afternoons are free for the student. Normally, work starts at about 1:30 p.m., and lasts until 4 or 5 p.m. Students are paid standard wages for the time they put in.

Most Students Girls

To date, most of the students who have joined the program have been girls. The majority have been employed as typists, stenographers, bookkeepers, and clerks. A number of boys, however, have been employed in engineering and drafting departments, as well as on the production line.

Some of the jobs are rather unusual. The Rheumatic Fever Research Institute, one of the largest organizations of its kind in the world, has employed five students during the past three years — three of them girls — as lab technicians. Other students have explored diverse specialties as social workers, the grinding of optical lenses, and a youngster who wanted to be a musician was employed in the library of the Chicago Symphony Orchestra, while another obtained a job as a medical secretary.

Initially, department supervisors in some firms looked askance at the work-study program. They thought

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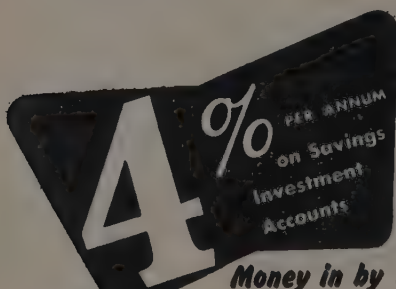
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d be flooded with a horde of ch-chewing, hair-combing teenagers. But now, these same supervisors keep asking the company personnel department to send them students. In view of the fact that training the kids imposes an extra load on the supervisor, this is quite a testimonial to the success of the program.

Trends In Business

(Continued from page 10)

pared with our estimate of 45 tion."

On what do airline experts base these market projections? Comfort and dependability of flights has counted a great deal according to J. Barkes. He adds, "The next season is speed. It was only in 1954 that regularly scheduled nonstop transcontinental service was established with an elapsed westbound flying time of nine hours from New York to Los Angeles. Now, within a year of the beginning of that service, the flying time will be reduced by 40 per cent."

When jets are used by the domestic airlines here are some figures showing how typical runs will be reduced in flying time. From Chicago to New York, jets will take one hour and 15 minutes compared with 2 hours and 45 minutes now. Chicago to Los Angeles: jets, three hours and 50 minutes; now, six hours and 15 minutes. Chicago to Miami: jets, two hours and 50 minutes; now, three hours and 15 minutes. Chicago to Washington: jets, one hour and 30 minutes; now, two hours and 15 minutes.

Calumet Area

(Continued from page 31)

the Calumet situation under review," says Conservation Commissioner Richard Smykal, "and we are considering conservation treatment for it."

The Chicago Housing Authority is awaiting interpretation by Philip H. Hauser, director, Chicago Community Inventory, of the results of a special U. S. Census Bureau survey of metropolitan-area housing. "At the present time," says General William B. Kean, executive director, "we are making an exhaustive study of the sites we would ask for under present Congressional appropri-

tions. I, personally, have done a lot of thinking on the Calumet area and where structures would be necessary to mesh with the new influx."

The Chicago Land Clearance Commission's executive director, Phil A. Doyle, asserts that the agency is much interested in the Port area, but that the Commission's purpose of slum clearance focuses its major work on older, worn-out areas. With regard to new housing, he continues, "Practically all of the land sold by the Commission for redevelopment with housing is purchased by privately financed redevelopers. The generally prevailing cost of construction will inevitably determine the minimum prices at which dwelling units can be sold or rented by redevelopers."

Plan Commissioner Bach feels that "good strong enforcement" of Chicago's new housing code can hold the line against pressures for overcrowding, but concedes this could encourage suburban housing developments of minimal quality. He comments that the situation "shows we ought to have some metropolitan planning."

But O'Toole, whose Pullman

Bank reportedly is the largest mortgage agency south of Sixty-Third street, states emphatically: "I don't see any solution but low-cost rental housing. We cannot have any growth in this industrial area unless we bring in more labor, including common labor. If you have job opportunities and no housing, then no matter what building laws are passed, they will be violated. Our biggest single problem in selling homes now is finding people with adequate monthly income. If we are having this problem now, how will we meet an influx of lower-paid workers?"

O'Toole, himself, who also serves as president of the influential Calumet Region Congress, provides part of the answer. "We all want this expansion," he says, "and we can all taste the prosperity. Our businesses are here, and we are going to remain here. I already have discussed some of the problems informally with other Calumet businessmen, and I am convinced that we can get together and help work out the solutions. And I want to emphasize that I am convinced they can and will be solved."

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Ballygally	Head	Ju

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Tammefors	Finlake	Ju
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Ragneborg	Swedish Chicago	Aug

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Herford	Ellerman Great Lakes	Ju
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Kollbryn	Niagara	Ju
Joliet	Fabre	Ju
Kollfinn	Niagara	Aug

Caribbean Destinations

Ciandra	Ahlmann Transcaribbean	Aug
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Electronics

(Continued from page 21)

One of the greatest economic and cultural stumbling blocks to mankind has been the language barrier — in business, in science, in social contacts. Much of the misunderstanding and enmity existing between nations today can be traced, in part, to the inability of people of one nation to understand the people of another whose language is different. Only about 50 per cent of the world's scientific papers are published in English, and that percentage is now dropping rapidly. Probably less than 60 per cent of the world's business literature is published in English; and this percentage, too, is declining.

Lack of Knowledge

How many fundamental scientific concepts of great importance written in other languages have never been translated or read in the United States? And to what extent is our progress held back by our lack of knowledge of what other people have discovered or invented?

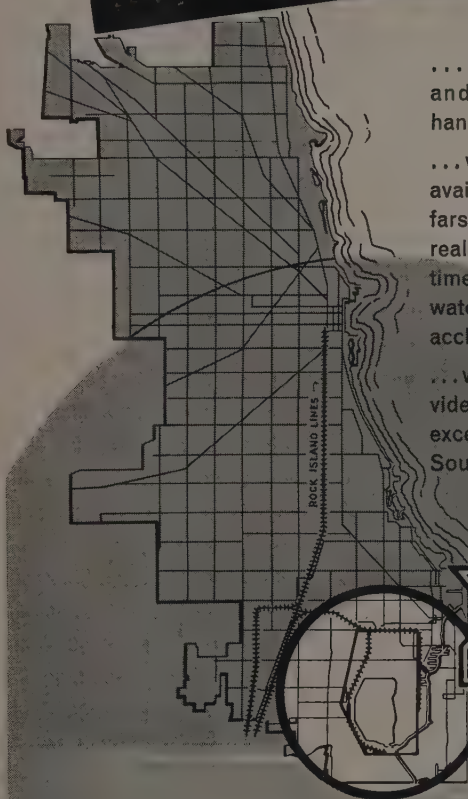
The requirements of translation are on such a tremendous scale — and they are rapidly multiplying as backward nations progress — that a mass production technique of translation is vitally needed if the lines of communication between workers everywhere are to be opened. Why not, then, a machine to translate languages?

That's not as easy as asking the question, because here is what such a machine would have to do: 1) The original text — written or spoken — must be fed into the machine. 2) The text must be then transcribed into symbols or code that the machine can handle. 3) The meaning — must bear in mind the subtleties of language — must then be translated from one language to another. After that, the translation must be fed back into conventional words and units in the new language. And, the translated text must be presented in readable or audible form.

Can electronics accomplish this? Scientists in this field say yes — optimistically. One of them last year predicted that we shall see such a

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machine translate within five years.

Can a human voice actually power a tiny radio transmitter — that is, a radio transmitter requiring no battery or other outside source of power, with all its power coming from the operator's speaking voice? The Army Signal Corps says yes. It has one in the developmental stage, which has already broadcast a man's voice some 600 feet. This could replace the walkie-talkie, which industry has found extremely useful for the taking of inventories.

A phonograph attachment now exists in a laboratory that transmits the output of a phonograph to a nearby radio receiver without any wire connections. And the Army now has portable battery-operated television cameras weighing 50 pounds for battlefield coverage. Think how such a device could be extended into sales promotion.

RCA is working on a new electron-image tube that will be capable of translating coded signals from tape, keyboard, or radio into clearly defined letters or figures at speeds up to a fantastic 100,000 words per minute for high-speed photographic recording. Ultimately, this may become a new technique for electronic typesetting.

M. I. T. has revealed an electronic device called the Versitron, which is so sensitive it can detect temperature changes of a fraction of a degree. At the estimated outside limits of its application, according to one of the university's scientists, the Versitron would allow the construction of an instrument which could detect miles away whether a person had a fever or not.

Radical Innovations

Radical innovations in television studio program production are not far away. NBC is planning a studio that almost thinks for itself. It will actually adapt itself spatially, mechanically, and electronically to script requirements. It will follow directions it issues to itself from a piece of tape!

This tape will cause the studio to expand or contract as required; it will cause the studio floor to assume the shape, height and depth demanded by the scene; it will swing the cameras to shooting position, select the lenses, focus, cause the lights to rise, tilt, lower, pan, dim

as needed. Absent from the studio floor will be camera dollies, mike booms, cameramen, boom operators, electricians and dolly pushers. The performers and the directors will have the television stage to themselves and — as one commentator put it — a little tape shall lead them!

RCA engineers believe that it is entirely possible that news photographers will be able to take still pictures at isolated locations and immediately transmit them electronically directly to their offices. In the composing room, newspapers will extend the application of electronics to typesetting devices, the forerunners of which actually exist today.

Pre-Set Speeds

The electronically controlled automobile travelling at pre-set speeds on major highways is already well out of the realm of pure fantasy. The first models can be expected on a few highways within ten years, the scientists tell us. And, we can be sure at the same time that there will be many electronic devices—some of them do exist today—which will control the highway traffic of

the future and thus make it even possible for such electronically controlled cars to travel safely.

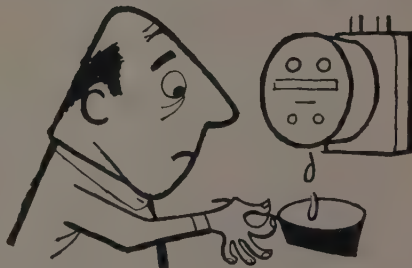
Dr. W. R. G. Baker, vice president and general manager of GE's Electronic Division recently remarked: "It may be possible to drive a gas station, have your tank filled automatically and have the bill sent to your electronic credit by machine."

Materials Handling

In the area of materials handling one company is experimenting with a device that automatically sorts items from stacked bins, any items selected for by an operator who simply punches keys on a keyboard. The items are then released onto a conveyor belt. One operator can control the work of ten stock boys. Development of this kind should bring about a complete revolution in materials handling in the movement of merchandise into and out of warehouse and into and out of retail stores.

In the comparatively near future the housewife will be able to do a great deal of her shopping without stirring from the house. It

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technically feasible to use the home screen to show merchandise and enable her to record her choices pressing buttons with electrical pulses electronically recorded at distant point. Such devices, when they come, will, of course, use color, the pictures will be in three dimensions as mural television takes for the bulky instrument now in use. Within ten years, it is very probable, the retail store as we know it may be in the very early stages of disappearing, as more and more shopping is done in the home through electronic devices stemming from color television.

In the next 10 years the technology of communications — and electronics — concerned primarily with all types of communications — will change more radically than it has in the past 50 years when communications changed more than it had in the entire history of mankind. Perhaps the most astonishing thing about electronics is that there are as many, perhaps more, items for ultimate mass production in the laboratory than are actually being marketed today.

Atomic Capital

(Continued from page 17)

marine "Nautilus," for the conceptual design of the nuclear plant the "Nautilus" came from the physicists and engineers of Argonne. Finally, our nation's first nuclear power plant, designed and built exclusively for the production of electric power, is already in operation in Chicago. It is the Experimental Boiling Water Reactor, which — with its capacity of 5,000 kilowatts — has been providing electricity to the Argonne Laboratory's facilities since early this year.

Since the Experimental Boiling Water Reactor will provide much of the research data and technological assistance for the construction of the new power plant, it is gratifying to be able to report that its functioning has been more than satisfying. Its performance indicates that it probably can produce twice its designed power — or upwards of 10,000 kilowatts. Another boiling water "pilot plant" which will furnish valuable technology for the new power plant is the power reactor



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which General Electric is building at Vallecitos, California. But the Vallecitos plant will not be merely as experimental device to aid General Electric in building the Dresden plant; it too will produce commercial power. Later this year, that pilot plant will be turning out 3,000 kilowatts of electricity to be distributed over the lines of the Pacific Gas and Electric Company.

Extensive Study

From these facts, it is evident that the boiling water concept of nuclear power plants is backed by extensive study and experiment. The functioning of the Experimental Boiling Water power plant at Argonne has confirmed the opinion of the Commission's staff that this type is one of the most efficient, and most promising among the several being actively pursued in the Commission's development program. It is also inherently a safe design.

The Commonwealth Edison Plant at Dresden is the first full-scale nuclear power plant anywhere in the world on which actual construction has begun on a completely "risk basis." This plant, to cost some \$45-million, is being financed entirely by private capital without any direct financial contribution by any government. This is a tribute to the bold vision and the enterprise of Commonwealth Edison and its associated companies, and their confidence in the atomic future. This is private enterprise at work for peaceful progress and public welfare, in the best American tradition.

This bold resourcefulness was only to be expected, perhaps, since Commonwealth Edison was one of the

earliest pioneers in the program to develop nuclear power in this country. Back in May of 1951, the Atomic Energy Commission asked American industries and utilities to submit proposals for getting underway special studies on "the practicality of business and industry building and operating reactors for power production."

Commonwealth Edison, together with the Public Service Company of Northern Illinois, was one of four groups selected to make these studies. At that time, the development of atomic energy—in both military and civilian applications—was held in the tight, restrictive grip of government monopoly. In fact, in September of 1952, the prevailing philosophy as stated by a spokesman for the AEC was that

"We cannot split the atom in the energy industry into two camps, labeling one for military purposes and keeping it under government control, and labeling the other for civilian purposes and releasing it to private industry. . . . The fundamental thesis on which the Atomic Energy Act of 1946 then in effect is based is that the development of atomic energy was to be under government monopoly."

No Major Project

A few weeks later, in December 1952, the Joint Committee on Atomic Energy of the Congress was knowledgeable in a published report that there existed in the United States "no major project whose purpose is to achieve a reactor designed for advancing industrial power." No atomic power plant existed; none was under construction. Thus the unpromising situation that prevailed at the beginning of the decade and it was not until the following year, in August 1954, that the government monopoly was broken by passage of the Connecticut Atomic Energy Act.

In these past three years, the growth of this infant industry has been unprecedented. No other major discovery by science has been applied so quickly to commercial uses. At least 21 American firms are either presently building, or planning to build, nuclear reactors for the production of electricity, for

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sion or for research. During the calendar year, the new industry reported the start of construction the negotiation of contracts for a total of 59 new nuclear reactors for private buyers in this country, for government or for export. Twentynine of them are for power production and 30 others for research testing. In addition, work went forward on 17 reactors of various types for which contracts had been awarded prior to 1956. None of this business existed prior to 1954.

The building of reactors is not only activity in the new nuclear industry. During the past year, American firms signed contracts or announced plans to build eight uranium ore-processing mills, a feed materials plant, five plants for the production of nuclear fuel-elements, ten so-called critical facilities, and five plants to produce metals of nuclear age such as zirconium, beryllium.

Civilian Power

The atomic energy industry expects to spend about \$270-million this year on the construction of civilian power and military reactors, as well as another \$200-million on uranium mining and milling, some \$50-million on instrument manufacture and perhaps \$25-million on nuclear research, aside from power reactor research. The total outlay this year for the infant industry exceeds of a half-billion dollars. Meanwhile, five and perhaps six nuclear plants for the production of civilian power will come into operation this year. Two of them, in fact, already are generating electrical power — the boiling water reactor at Argonne and the Army Package Reactor at Fort Belvoir near Washington. General Electric's "pot" installation for the Dresden plant — now nearing completion at Indio, California — will come on line soon, as will North American's sodium-producing sodium-cooled reactor at Santa Suzana, California, and the homogeneous power reactor at Oak Ridge, Tennessee. The DuPont-Westinghouse 60,000-kilowatt nuclear power plant at Shippingport, Pennsylvania, is scheduled for completion this year.

By the mid-1960's there will be a number of plants serving homes and industries across the nation and

among these there will be eight or more which—like the Dresden plant—will be financed entirely by private capital without calling upon the government for any direct financial assistance. These privately built plants will, by themselves, have a total capacity well in excess of one-million kilowatts, without taking into account the nuclear power plants to be built under the government's partnership arrangement with in-

dustry under the Power Demonstration Program.

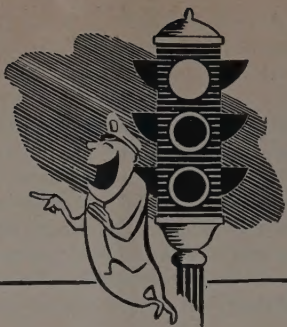
The past three years have seen a significant change. American industry has moved into the field with boldness and resolution and with confidence based on the sound technology of many resourceful research organizations. The next three years will bring an accelerating increase in both discovery and application of the peaceful atom.

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Stop me...If...



The father, passing through his son's college town late one evening, thought he would pay his son a surprise visit. Arriving at the son's fraternity house, he rapped on the door but was unable to rouse anybody. Then from a second floor window came a sleepy voice.

"Whaddayah want?"

"Does Steve Jones live here?" said the father.

"Yeah," replied the voice. "Bring him in."

"Repeat the words the defendant used," said the lawyer.

"I'd rather not. They were not fit words to tell a gentleman."

"Then," said the attorney, "whisper them to the judge."

"Isn't it hard to keep a budget straight?" wailed Mrs. Johnkins.

"My dear, it's terrible!" confided Mrs. Smithkins. "This month I had to put in four mistakes to make mine balance."

Young Son: "Dad, Mom just backed the car out of the garage and ran over my bicycle."

Dad: "Serves you right for leaving it on the front lawn."

"Is Dan a confirmed bachelor?"

"He is now. He sent his picture to a lonely hearts club and they sent it back with a note saying: 'We're not that lonely.'"

The wife of a farmer sold her surplus butter to a grocer in a nearby town. One Saturday morning the grocer told her, "Your butter was underweight last week."

"Now, ain't that something," said the woman. "I was unable to locate my weight for the scale that day, so I used the pound of liver you sold me."

Sign in a Park Avenue apartment house: "Please do not leave baby carriages or foreign cars in the lobby."

Little Mary—"Teacher, can't you come to see our new baby?"

Teacher—"Thank you, dear, but I'll wait a while until your mother is better."

Little Mary—"Oh, that's all right, teacher, it isn't catching."

The bright young high school graduate applied for his first full-time job in the railroad car department. He read the application blank which asked, "What machines can you operate?"

The youth studied hard, then wrote, "Slot and pinball."

The drunk staggered from deck to state-room, sat down, and peered through the porthole the entire afternoon. Finally he got up, turned his back, and mumbled, "What a lousy television show."

Foreman—"How is it that you carry only one plank and all the other men carry two?"

Worker—"They're just too lazy to make two trips like I do."

The geography teacher asked Bobby a question about the English Channel.

"I don't know," answered Bobby, "we don't have that channel on our TV set."

Things had been extremely quiet at the police station for quite a while and desk sergeant was worried.

"I don't know what to think!" claimed one morning. "Here's a week gone by and no robberies, no muggings, no drunk or disorderly cases, not even a traffic arrest. If something doesn't happen pretty soon, they'll hang us off."

"Don't worry about a thing, Sergeant," replied a patrolman. "Something's bound to happen soon. I've still got a lot of human nature!"

Little Tommy, crying lustily, came out of a room in which his father was doing some amateur carpentering.

"Why, Tommy, what's the matter?" his mother asked.

"D-d-daddy hit his finger with the hammer," sobbed Tommy.

"Well, that's nothing to cry about," comforted his mother. "Why didn't you tell me?"

Sobbed Tommy: "I did!"

After a very trying day at the office, a husband was enjoying his pipe and the evening paper. His wife, working on a crossword puzzle, suddenly called out, "John, what is a female?"

"Ewe," replied her husband. And the fight began.

"She's an after dinner speaker."

"She is? I didn't know that."

"Yes. Whenever she speaks to me, it's after dinner."

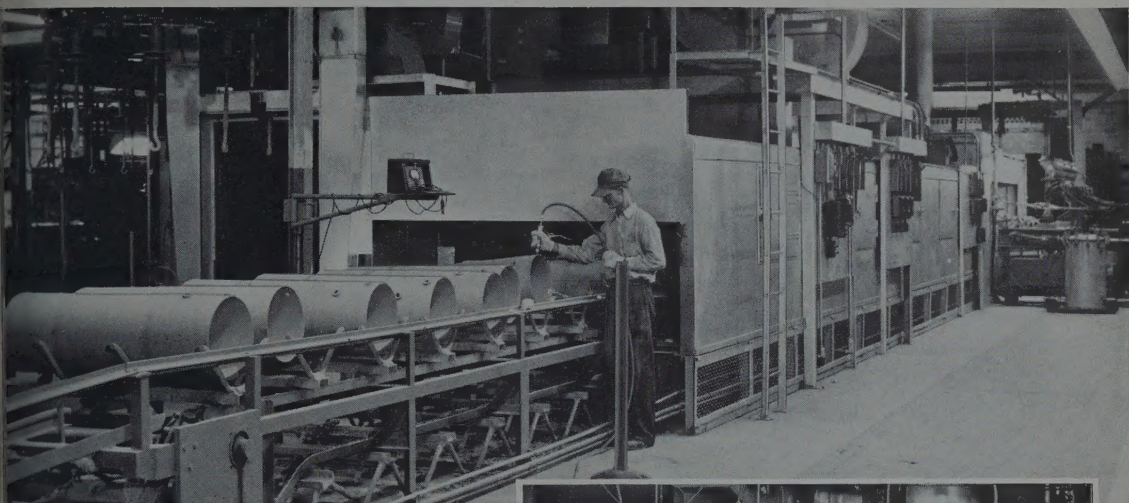
"Can you help me select a gift for my wealthy old uncle who is awfully weak and can hardly walk?"

"How about some floor wax?"



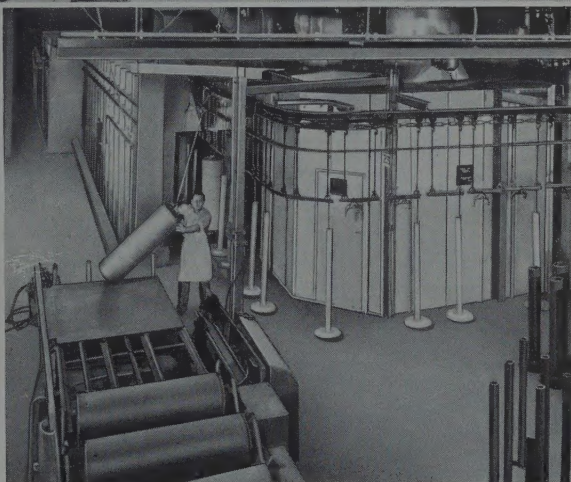
"Did you bring the buns?"

GAS AT WORK for Chicago's Industry



Above: The Rheem Manufacturing Company, 7600 South Edzie Avenue, Chicago, manufactures water heater tanks with Rheemglas lining to protect them from rust and corrosion. In this process, the shells are sprayed with a special slip (called slip when wet, bisque when dry) and dried in a 3-foot hot zone Gas-fired drying oven.

Right: After drying, the shells are attached to a continuous monorail conveyor which carries them through the three-zone heat controlled Gas-fired enamelling furnace. This furnace converts the coating of bisque to the final Rheemglas surface.



The Rheem Manufacturing Company fabricates and assembles various types of water heaters, boilers, space heating equipment and water softeners and is one of the country's largest producers of steel shipping containers. Throughout the plant on Chicago's southwest side, Gas is used in large quantities for various types of industrial processing. These include enamelling, galvanizing, lithographing, drying and parts washing.

For information on how Gas can serve you in your production operations, call WAbash 2-6000, Extension 2449. One of our industrial engineers will be glad to discuss Gas fuel and its economies as they apply to your plant.

THE
PEOPLES GAS
LIGHT AND COKE COMPANY

INDUSTRIAL DEPARTMENT



Who turned on the juice in Chicago?

Back in the days when Goldilocks Monroe was a star of tomorrow and postwar prosperity had the big, bad wolf on the run (circa 1952), Henry Bear put on his far-seeing specs to take a peak at the future of the appliance business.



And it looked good,
very good.

And this made Henry very glad. Because he was the big Chicago distributor for AC-DC, dynamos of the electrical appliance world. Henry's only problem was how best to spend his advertising dollars. Was it better to let selected dealers control his advertising? Or sell his brand himself and feature *all* his dealers?

Henry decided to discuss this explosive question with Joe, expert trouble-shooter from the Chicago Tribune. And it just so happened that Joe was loaded with all the current facts that Henry needed. For instance: in 1952 small dealers in the Chicago market accounted for as many sales of major appliances as large dealers. (And the picture hasn't changed today. In 1956, small dealers sold 53% of all automatic washers, 67% of all refrigerators, and 70% of all kitchen ranges.) So, Joe's song went something like this:

"A distributor can't go wrong supporting both big *and* little dealers with a powerful advertising campaign direct to consumers. This advertising must be local (to support local dealers) heavy (to pre-

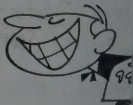
sell consumers) and consistent (to maintain price needed for sales)."

And if you're familiar with space reps (and c are you are), you can guess the advertising m he recommended.

Henry bought all of Joe's fine recommendations. He ran a giant-size campaign in the Chicago T

The scene now switches to Henry's office, ny later. Enter Joe, pleased as Punch and 10 heavier. (He says he's going on a diet next. The reason why he feels so pleased is beca Tribune's 1956 Home Appliance Survey sho since 1952, AC-DC has increased its share of in its most important appliance lines. Wa up 42%; dryers—up 28%; vacuum clean 56%; room air conditioners—up 124%. Ever highly competitive field of refrigerators, A share of sales had increased from 16.3% to

So as a result of AC-DC's intensive Chicago tising efforts mainly concentrated in the T Henry Bear, Joe and the friendly neighborhood dealers are all living happily ever after.



Now maybe you sell astringents or automo stead of appliances, but if you want to sell them in Chicago, call on Joe. Nobody Chicago like the Tribune. Nothing sells like the Tribune. And Joe can give the facts

Chicago Tribune

THE WORLD'S GREATEST NEWSPAPER

